Charlotte County Utilities

Manual of Rules and Regulations Governing Cross-Connection Control and Backflow Prevention

Updated

Approved by _____

Dave Watson Date

Director of Utilities

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SECTION 1 – INTRODUCTION

Section 3-8-202 of the Charlotte County Code, contained within Chapter 3-8, Article VI, titled "Reclaimed Water System" references the County's Manual for Cross-Connection Control and Backflow Prevention. This applies to the most current version of the manual, as promulgated, and subsequently updated by Charlotte County Utilities.

This "Manual for Cross-Connection Control and Backflow Prevention" has been prepared by the Charlotte County Utilities (CCU) to ensure the safety of the potable water system and to establish an effective cross-connection program in accordance with directives issued at the federal and state level. This manual provides the rules, regulations, specifications, and procedures necessary to administer the backflow program and facilitate compliance of the aforementioned federal and state laws, statutes, and regulations.

CCU provides this manual for use in designing a project or installing a cross-connection control device, believes the material in this manual will provide the consumer with the understanding of cross connections and cross-connection control assemblies, and will ensure that the standards and specifications as set forth in this manual will be uniformly enforced. CCU reserves the right to update this manual as necessary due to changes or to better comply with FDEP policies and regulations and/or USC Foundation for Cross-connection Control and Hydraulic Research or AWWA standards.

1.1 Program Description

Charlotte County Utilities Cross-Connection Control Program is a containment program, rather than an isolation program. A containment program is one that protects the water supply at the point of connection to the consumer's water piping by requiring that an approved backflow prevention assembly be installed at every water meter or fire protection service connection when a potential cross-connection hazard exists. This will greatly reduce the chances of a widespread contamination event due to backflow. An isolation program goes further into the plumbing systems of individual homes and buildings and addresses all aspects of possible cross-connections within those systems and is addressed under the Florida Building Code.

1.2 Purpose

The purpose of a Cross-Connection Control Program is to:

1. Protect the potable water supply of Charlotte County from the possibility of contamination or pollution,
2. Promote the elimination and control of cross connections (actual or potential) between potable water system(s), non-potable water system(s), and plumbing fixture(s) in existing commercial and/or residential buildings.

3. Provide for the management and operation of a continuing program of cross-connection control which will systematically and effectively prevent the contamination or pollution of the County's water distribution system, as required by F.A.C. Chapter 62-555.360.

1.3 Protection and Reclaimed Water

Community water systems and all public water systems which have service areas that are also served by reclaimed water systems as defined in Chapter 62-610, Part III, F.A.C., shall establish a routine cross-connection control program to detect and prevent cross-connections that create or may create an imminent and substantial danger to public health. This program shall include a written plan that is developed using accepted practices of the American Water Works Association as set forth in the reference documents cited in Rules 62-555.330(6) and (7), F.A.C. (Ref.: F.A.C. Chapter 62-555.360 or latest edition.)

SECTION 2 – REGULATIONS, ACTS, LAWS

The following regulations, acts, and laws are justification in establishing a Cross-Connection Control Program.

2.1 Safe Drinking Water Act

The Safe Drinking Water Action (PL 93-523) was signed into law by Congress on December 16, 1974. The purpose of the law is to assure that the Nation's potable water supply systems serving the public meet minimum National Health Standards for the protection of the public health.

In accordance with the Safe Drinking Water Act, the National Interim Primary Drinking Water Regulations were promulgated on December 24, 1975 and became effective on June 24, 1977. These regulations replaced the Public Health Service Drinking Water Standards of 1962. **Appendix A** states that the "minimum protection should include programs that result in prevention of health hazards, such as cross connections."

The Safe Drinking Water Act and its regulations cover all public water systems with piped water for human consumption with at least 15 service connections or a system that regularly serves 25 individuals. Under Section 1413 of the Safe Drinking Water Act, states assume primary enforcement responsibilities for their water quality program as long as the state's drinking water regulations are as stringent as federal regulations. The Administrator of the Environmental Protection Agency retains authority over states that do not obtain primacy, as further described in **Section 2.2**.

2.2 State of Florida Regulations

The State of Florida was granted primacy over the water program under the authority of the "Florida Safe Drinking Water Act," Chapter 403.850-403.864, Florida Statutes. In January 1975, the State of Florida adopted Florida Administrative Code Chapter 17-22 (Public Drinking Water Systems) and the regulations went into effect in November 1977. The Florida regulations were revised in November 1987 to address the topic of cross-connection control and backflow prevention and incorporated more specific language than what is contained in the federal regulation. The Florida regulations (Chapter 17-22, F.A.C.) were revised again, and renumbered in December 1996 as Florida Administrative Codes 62-550, 62-555, and 62-560.

The most recent FDEP amendment to 62-555-360, F.A.C. was published May 5, 2014. This manual reflects these changes.

As stated in 62-550.200 F.A.C., "Cross Connection" means any physical arrangement whereby a public water supply is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains or may contain contaminated water, sewage or other waste, or liquid of unknown or unsafe quality which may be capable of imparting contamination to the public water supply as the result of backflow. By-pass arrangements, jumper

connections, removable sections, swivel or changeable devices, and other temporary or permanent devices through which or because of which backflow could occur are considered cross connections."

Rule 62-555.360(1), F.A.C., states that "Cross-connections, as defined in Rule 62-550.200, F.A.C., are prohibited unless appropriate backflow protection is provided to prevent backflow through the cross-connection into the public water system."

Rule 62-555.360(2), F.A.C., states that "Each community water system (CWS) shall establish and implement a cross-connection control program utilizing backflow protection at or for service connections from the CWS in order to protect the CWS from contamination caused by cross-connections on consumers' premises.

Rule 62-555.360(3), F.A.C., states that "Upon discovery of a prohibited or inappropriately protected cross-connection, public water systems either shall ensure that the cross-connection is eliminated, shall ensure that appropriate backflow protection is installed to prevent backflow into the public water system, or shall discontinue water service."

2.3 Local Enforcement

CCU's Cross-connection Control Program is based on the guidelines set down in Rule 62-555.360, F.A.C.

2.4 Accepted Practices and Industry Standards

Such a program shall be developed utilizing accepted practices and standards of the American Water Works Association as guidelines as set forth in AWWA Manual M14, "Recommended Practice for Backflow Prevention and Cross-connection Control" (3rd edition), AWWA Manual "Cross Connection and Backflow Prevention" (2nd edition), (F.A.C. 62-555.360), The EPA Cross-connection Control Manual and the USC Cross-connection Manual of Cross-connection Control (latest edition).

2.5 Responsibility

CCU and Charlotte County Building Construction Services, as well as the utility consumers, share the responsibility for the protection of the potable water distribution system from contamination or pollution due to the backflow of contaminants or pollutants through any and all water service connections. Charlotte County requires an approved backflow prevention assembly installed at the water service connection to all consumers' premises.

Charlotte County Utilities will designate the location of the backflow prevention assemblies. Failure, refusal, or inability on the part of the consumer to install a backflow assembly shall constitute grounds for refusal of water or the discontinuance of water to the premises until such an assembly or assemblies have been properly installed.

SECTION 3 – ABBREVIATIONS AND DEFINITIONS

3.1 Abbreviations

ASSE	American Society of Sanitary Engineers
AWWA	American Water Works Association
CCC	Cross Connection Control
CCU	Charlotte County Utilities
CWS	Community Water System
EPA	United States Environment Protection Agency
F.A.C.	Florida Administrative Code
FCCCHR	Foundation for Cross Connection Control and Hydraulic Research of the University of Southern California
FDEP	Florida Department of Environmental Protection
FDOH	Florida Department of Health
psi	Pounds per square inch (gauge)

3.2 Definitions

1. **Air Gap Separation**

   The term “air-gap separation” shall mean a physical separation between the free-flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel. An “approved air-gap separation” shall be at least double the diameter of the supply pipe measured vertically above the overflow rim of the vessel – in no case less than 1 inch (2.54 cm).

2. **Approved**

   The term “approved” as herein used in reference to air-gap separation, a reduced pressure principle backflow prevention assembly shall mean approval by the director of utilities or his/her designee.

3. **Approved Backflow Prevention Assembly**

   The term “approved backflow prevention assembly” shall mean an assembly that has been manufactured in full conformance with American Water Works Association (AWWA) Standards. Backflow prevention assemblies must also meet the laboratory and field performance specifications of the Foundation for Cross-connection Control and Hydraulic Research of the University of Southern California (FCCHR-USC). It must also be on current approved list by FCCHR-USC.

4. **Auxiliary Water System**

   “Auxiliary water system” means a pressurized system of piping and appurtenances using auxiliary water, which is water other than the potable water being supplied by the community water system and which includes water from any natural source such as a well, pond, lake, spring, stream, river, etc., includes reclaimed water, and includes

other used water or industrial fluids described in *AWWA Manual M14* as incorporated in paragraph 62-555.360(1)(a), F.A.C., and subsection 62-555.360(2), F.A.C.; however, "auxiliary water system" specifically excludes any water recirculation or treatment system for a swimming pool, hot tub, or spa. (Note that reclaimed water is a specific type of auxiliary water and a reclaimed water system is a specific type of auxiliary water system.)

5. **Backflow**

   The term "backflow" shall mean the undesirable reversal of flow of water or mixtures of water and other liquids, gases or other substances into the distribution pipes of the potable supply of water from any source or sources.

6. **Backflow Prevention Assembly - Type**

   A "backflow prevention assembly" shall mean any effective assembly used to prevent backflow into a potable water system. The type of assembly used should be based on the degree of hazard either existing or potential. The types are:

   A. Double Check Valve Assembly – Commercial Only

   B. Double Detector Check Valve Assembly – Commercial Only

   C. Reduced Pressure Principle Assembly

7. **Back Pressure**

   "Back pressure" shall mean any elevation of pressure in the downstream piping system (by pump, elevation or piping, or stream and/or air pressure) above the supply pressure at the point of consideration which would cause, or tend to cause, a reversal of the normal direction of flow through the backflow prevention assembly.

8. **Back Siphonage**

   "Back siphonage" shall mean a form of backflow due to a reduction in system pressure which causes a negative or sub-atmospheric pressure to exist at a site in the water system.

9. **Certified Backflow Prevention Assembly Tester**

   "Certified backflow prevention assembly tester" shall mean a person who can prove competency to the satisfaction of Charlotte County Utilities (proof may be required). The tester shall have attended and successfully completed an approved course for backflow prevention assembly testers from University of Florida Training, Research and Education for Environmental Occupations (UF TREEO) or Florida Water and Pollution Control Operators Association (FWPCOA).

10. **Certified Backflow Prevention Assembly Repair**

    "Certified backflow prevention assembly repair" shall mean a person who can prove competency to the satisfaction of Charlotte County Utilities (proof may be required).

The repair shall have attended and successfully completed an approved course for backflow prevention assembly repair from University of Florida Training, Research and Education for Environmental Occupations (UF TREEO) or Florida Water and Pollution Control Operators Association (FWPCOA).

11. **Charlotte County Utilities**

    "Charlotte County Utilities" (CCU) shall mean the director or his/her designee who is vested with the authority and responsibility for the implementation of an effective Cross-Connection Control Program and the enforcement of the provisions of this ordinance.

12. **Consumer -**

    The term "consumer" shall mean the owner or operator of a private plumbing and/or water system who receives water from the CCU water system.

13. **Consumer – Residential**

    The term "residential" shall mean a single-family residence connected to the public water system by a single connection.

14. **Consumer – Commercial**

    The term "commercial" shall mean any multi-family, duplex, triplex, quadplex residence connected to the public water system by a single connection. It shall also mean all remaining land use types connected to the public water system by a single connection.

15. **Contamination**

    "Contamination" shall mean an impairment of the quality of the water which creates an actual hazard to the public health through poisoning or through the spread of disease by sewage, industrial fluids or waste.

16. **Cross Connection**

    A "cross connection" shall mean any unprotected actual or potential connection or structural arrangement between a public or a consumer's potable water system and any other source or system through which it is possible to introduce into any part of the potable system any used water, industrial fluid, gas, or substance other than the intended potable water with which the system is supplied. By-pass arrangements, jumper connections, removable sections, swivel or change-over assemblies and other temporary or permanent assemblies through which or because of which "backflow" can or may occur are considered to be cross connections.

17. **Cross-connection Control**

    "Cross-connection control" shall mean control of connection between a potable water system and a non-potable plumbing and/or water system by proper installation of

approved backflow prevention assembly that will continuously protect the potable water system.

18. **Double Check Valve Assembly**

    An assembly composed of two single, independently acting, check valves, including tightly closing shutoff valves located at each end of the device and suitable connections for testing the water tightness of each check valve. A check valve is a valve that is drip-tight in the normal direction of flow when the inlet pressure is one psi and the outlet pressure is zero. The check valve shall permit no leakage in a direction reverse to the normal flow. The closure element (e.g., clapper) shall be internally weighted or otherwise internally loaded to promote rapid and positive closure.

19. **Double Detector Check Valve Assembly**

    The term “double detector check valve assembly” shall mean a specifically designated assembly composed of a line size approved double check valve assembly with a specific bypass water meter and a meter sized approve double check valve assembly. The meter shall register accurately for only very low rates of flow and shall show a registration for all rates of flow. This assembly shall only be used on fire lines to protect against a non-health hazard (i.e., pollutant).

20. **Hazard, Degree of**

    The term “degree of hazard” shall be derived from the evaluation of conditions within a system which can be classified as either a “pollutional” (non-health) or a “contamination” (health) hazard.

21. **Hazard – Health**

    The term “health hazard” shall mean an actual or potential threat of contamination of a physical or toxic nature to the public potable water system or the consumer’s potable plumbing and/or water system that would be a danger to health.

22. **Hazard – Plumbing**

    The term “plumbing hazard” shall mean an internal or plumbing type cross-connection in a consumer’s potable water system that may be either a pollutional or a contamination type hazard. This includes but is not limited to cross connections to toilets, sinks, lavatories, wash-trays, domestic washing machines and lawn sprinkling systems. Plumbing type cross- connections can be located in many types of structures including homes, apartment houses, hotels, and commercial or industrial establishments. Such a connection must be properly protected by an appropriate type of cross connection assembly.

23. **Hazard – Pollutional**

    The term “pollutional hazard” shall mean an actual or potential threat to the physical properties of the water system or the portability of the public or the consumer’s potable water system but which would not constitute a health or system hazard, as defined.

The maximum degree or intensity of pollution to which the potable water system could be degraded under this definition would cause a nuisance or be aesthetically objectionable or could cause minor damage to the system or its appurtenances.

24. **Non-Potable Fluids**

The term “non-potable fluids” shall mean any fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollutional, or plumbing hazard if introduced into an approved water supply. This may include, but not be limited to; polluted or contaminated used water; all types of process waters and “used waters” originating from the public potable water system which may deteriorate in sanitary quality; chemicals in fluid form; plating acids and alkalis; circulated cooling waters connected to an open cooling tower and/or cooling waters that are chemically or biologically treated or stabilized with toxic substances; contaminated natural waters such as from wells, springs, streams, rivers, bays, harbors, seas, irrigation canals or systems, etc.; oil, gasses, glycerin, paraffin, caustic and acid solutions and other liquid and gaseous fluids used in industrial or other processes or for firefighting purposes.

25. **Industrial Piping System – Consumer’s**

The term “consumer’s industrial piping system” shall mean any system used by the consumer for transmission of or to confine or store any fluid, solid or gaseous substance other than an approved water supply. Such a system would include all pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey or store substances which are or may be polluted or contaminated.

26. **Laboratory – Approved Testing**

Reference to an “approved testing laboratory” shall mean the foundation for Cross Connection-Control and Hydraulic Research of the University of Southern California or another laboratory having equipment capabilities for both the laboratory and field evaluation of the assemblies.

27. **Pollution**

The term “pollution” shall mean an impairment of the quality of the water to a degree which does not create a hazard to the public health, but which does adversely and unreasonable affect the aesthetic qualities of such waters for domestic use.

28. **Residential Service Connection**

“Residential service connection” means any service connection, including any dedicated irrigation or fire service connection, that is two inches or less in diameter and that supplies water to a building, or premises, containing only dwelling units; and “non-residential service connection” means any other service connection.

29. **Reduced Pressure Principle Backflow Prevention Assembly**

The term “reduced pressure principle backflow prevention assembly” shall mean an assembly containing two independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. The unit shall include properly located test cocks and tightly closing shut off valves at each end of the assembly. This assembly is designed to protect against a health hazard (i.e., contaminant).

28**. Service Connection**

The term “service connection” shall mean the terminal end of a service connection from the public potable water system, i.e., where the water purveyor may lose jurisdiction and sanitary control over the water at its point of delivery to the consumer’s water system. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter, or the owner’s side of the utility owned backflow device.

29**. Thermal Expansion**

Thermal expansion is the tendency of matter to increase in volume or pressure when heated. In water systems damage, may occur if there is not a method to relieve the pressure.

30**. Water – Potable**

The term “potable water” shall mean any water which according to recognized standards is safe for human consumption.

31**. Water Purveyor**

The term “water purveyor” shall mean any public potable water supply which has been investigated and approved by the State of Florida Department of Environmental Protection. The system must be operating under a valid permit

32. **Water Supply – Approved**

The term “approved water supply” shall mean any public potable water supply which has been investigated and approved by the State of Florida Department of Environmental Protection.

33. **Water Supply – Auxiliary**

The term “auxiliary water supply” shall mean any water supply on or available to the premises other than the purveyor’s approved public potable water supply which may be used for residential irrigation or commercial uses including irrigation These auxiliary waters may include water from another purveyor’s public potable water supply or any natural source such as a well, spring, river, stream, harbor, etc., or “reclaimed water” or “industrial fluids”. Any such water supply may be polluted or contaminated or may

be objectionable and constitute an unacceptable water source over which the primary water purveyor does not have sanitary control.

34. **Water Supply – Unapproved**

The term “unapproved water supply” shall mean a water supply which has not been approved for human consumption by the State of Florida Department of Environmental Protection and/or is not operating under a valid permit.

35. **Water System – Community**

The term “Community Water System” shall mean a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

36. **Water System – Consecutive**

The term “Consecutive Water System” shall mean a public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems**.**

37. **Water System(s) – Consumer’s**

The term “consumer’s water system(s)” shall include any plumbing and/or water system located on the consumer’s premises whether supplied by a public potable water system or an auxiliary water supply. The system or systems may be either a potable water system or an industrial piping system.

38. **Water System – Consumer’s Potable**

The term “consumer’s potable water system” shall mean that portion of the privately-owned potable plumbing and/or water system lying between the point of delivery and the point of use. This system will include all pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey, store or utilize the potable water.

39. **Water System – Public**

The term “public water system” shall mean the CCU water system operated as a public utility under a valid permit to supply potable water for domestic purposes. This system will include all sources, facilities and appurtenances between the source and the point of delivery such as valves, pumps, pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey, treat or store a potable water for public consumption of use.

SECTION 4 – APPROVED BACKFLOW PROTECTION ASSEMBLY

Effective on the approval date of this manual for Cross-Connection Control and Backflow Prevention, CCU will be requiring the installation of a Reduced Pressure Principle Backflow Prevention Assembly on all potable services. Additionally, all backflow devices requiring replacement must be replaced with a Reduced Pressure Principle Backflow Prevention Assembly. This requirement is to provide the maximum protection of the potable water supply of CCU. CCU will own and maintain the residential backflow prevention assembly 2-inch or less in size. All backflow prevention assemblies that are installed on commercial properties are privately owned and maintained.

Any backflow prevention assembly required herein shall be of a model and size approved by CCU. The term “approved backflow prevention assembly” shall mean an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association entitled “AWWA C510-97 and AWWA C511-97 Standards for Reduced Pressure Principle Backflow Prevention Assembly.”

Backflow prevention assemblies must have the laboratory and field performance specifications of the Foundation for Cross-connection Control and Hydraulic Research of the University of Southern California (FCCHR-USC). It must also be on current approved list by FCCHR-USC.

SECTION 5 – NOTIFICATIONS, FEES, AND EDUCATION

5.1 Written Notices

CCU will provide notices to its consumers to keep them updated on actions that are necessary for them to be in compliance with the rules and regulations contained within this manual, the Florida Plumbing Code, and all other applicable State and Federal guidelines. The notices will include the following:

1. Notice to Install and Test a Backflow Assembly

Upon receipt of a written notice from CCU that an approved backflow prevention assembly is required at the water connection to any consumer's point of delivery, the consumer shall:

A. Install an approved assembly at consumer's expense within 60 days of this notice. A temporary water service connection requires an approved backflow preventer installed at the consumer's expense,

B. Have a certified backflow tester complete a test of the newly installed backflow and send the completed "Test and Maintenance Report" to Reclaimed and Support Services at the address in Section 10.2 within 30 days of the installation,

C. Request an extension of the timeframe for installation of the assembly. The extension will not be considered if the site is rated as high hazard. The extension may be granted for situations created that were beyond the control of the consumer including weather, construction delays, lack of certified testers, equipment shortages or related problems.

A copy of the notice is included in **Appendix A**.

2. Notice to Have a Backflow Assembly Tested

A written notice will be sent to commercial consumers and residential consumers to have an annual test completed on their backflow assembly. In those instances, where CCU deems the premise to have a potential high hazard situation, additional certifications will be required. Upon receipt of the testing notice, the consumer shall:

A. Have a certified backflow tester completely test the backflow and send a completed "Test and Maintenance Report" to Reclaimed and Support Services at the address in Section 10.2 within 60 days of receipt of the notice.

B. Have the backflow repaired or replaced if it fails the testing.

C. Have the repairs completed by an individual who is:

1. Certified in backflow repair by the organizations accepted by the FDEP.
2. Holds a current certificate as a master plumber.

3. Holds a license as a plumber and works under the supervision of a master plumber.

D. Have the backflow retested and have the results along with the repair information sent to Reclaimed and Support Services Department of CCU.

3. Notice of Non-compliance

A written notice of non-compliance will be sent to consumers who do not respond to the "Notice to Install" or "Notice to Test" in a timely manner. The Notice of Non-compliance will be sent to the consumer by certified mail. The packet will include a letter and the notice. Consumers will be required to:

A. Respond to the notice in writing, by phone, or email.

B. Comply with the notice by correcting the issue of non-compliance.

C. Send all test and repair results to the address in Subsection 9.2

4. Final Notice of Non-compliance

A final notice will be sent to the consumer including instructions on:

A. What is needed to complete the process.

B. The previous notifications.

C. Time given to complete process.

D. Penalty fee for failure to comply.

5. Procedure for Chemical or Biological Pollutants – Low Health Hazard

A low health hazard does not create a hazard to public health but impairs water aesthetics to an unreasonable standard. Upon discovery of a low health hazard violation to the public water supply, written notice thereof shall be given to the consumer. The notice (included in **Appendix A**) shall be delivered to the premises and a copy mailed to the billing address as registered on the water purveyors' billing records. The notice shall state:

A. Date and time the violation was noted.

B. The conditions or defects that must be corrected.

C. How the stated condition(s) are to be corrected.

D. Recommended date for re-inspection.

E. The date on or after delivery of water may be discontinued, shall not be less than thirty (30) nor more than sixty (60) days following the date of delivery or mailing of the notice. The water purveyor may grant the consumer an extension of an additional thirty (30) days if the water purveyor determines the consumer has been unable to comply with the notice within the time originally allowed but progress had been made in correcting the situation.

6. Procedure for Chemical or Biological Contaminants – High Health Hazard

A high health hazard does create an immediate hazard to public health. Service of water to any premise deemed as an immediate high health hazard to the public water supply shall be disconnected by personnel of CCU:

A. If a backflow prevention assembly required by law, rules or regulations is not installed, tested and maintained;

B. If it is found that a backflow prevention assembly has been removed, damaged, tampered with or bypassed;

C. If unprotected cross connections exist on the premises and there is inadequate backflow protection at the service connection.

Water service will not be restored until such conditions or defects are corrected. All turn-off and turn-on service charges shall be made applicable to the consumer.

5.2 Non-compliance

Submission by any person of any false statement or representation in any application, record, report, plan, or other document files, required by the policies included in this manual shall be in violation. Any person who has not complied with Federal, State, and Local laws or ordinances shall be in violation. Any person not complying with the CCU's Manual for Cross-Connection Control and Backflow Prevention shall be in violation. CCU shall have the right in instances of non-compliance to discontinue water service.

5.3 Fees and Charges

The County shall have the right in instances of non-compliance, including failure to test, repair, replace, or install the proper backflow preventors, to perform the required service and bill the consumer accordingly. The fees and charges that the County shall assess the consumer to carry out the provision of this manual shall be based on:

1. CCU's current established labor rate.
2. Cost of materials.
3. Fines, fees and charges are established by County Resolution.

5.4 Education

It is the responsibility of the water purveyor to provide education to the consumer in the areas of backflow prevention and cross connection. It is an essential part in the development and maintenance of an effective Cross-Connection Control Program. The program will include:

1. Printed material including brochures, pamphlets, and flyers distributed with bills, at utility sites, utilities website and special events.

2. Video tapes aired on public access television, public meetings, and meetings of related community groups.
3. Information provided to local media.
4. Presentations to community groups.

SECTION 6 – BACKFLOW AND NON-POTABLE FLUIDS

6.1 Policy

No water service connection to any premises shall be installed or maintained by CCU unless the water supply is protected as required by State of Florida Regulations and Plumbing Code, Charlotte County Codes, and the rules and regulations included in this manual. CCU shall evaluate the customer's premises at a newly constructed service connection before supplying water to the service connection.

Service of water to any premises shall be discontinued by CCU if a backflow prevention assembly required by this policy is not installed, tested, and maintained, or if it is found that a backflow prevention assembly has been removed, bypassed, or an unprotected cross connection exists on the premises. Service shall not be restored until such condition, or defects are corrected at the consumer's expense.

6.2 Inspections

The consumer's system shall be open for inspection at all reasonable times to authorized representatives of CCU to determine whether actual or potential cross connections exist. When an actual cross-connection condition becomes known that presents an immediate "high health hazard," CCU authorized representative shall deny or immediately discontinue service, upon notice to consumer, to the premises and by providing a physical break in the service line until the consumer has corrected the conditions to comply with State statues relating to plumbing and water supplies, and this adopted policy. Any cost in disconnection or re-connection of the water service will be paid by the consumer.

CCU shall inspect the customer's premises at an existing – i.e., previously constructed – service connection whenever the customer connects to a reclaimed water distribution system, whenever an auxiliary water system is discovered on the customer's premises, whenever a prohibited or inappropriately protected cross-connection is discovered on the customer's premises, whenever the property experiences a change in ownership, and whenever the customer's premises is altered under a building permit in a manner that could change the backflow protection required at or for a service connection to the customer.

6.3 Auxiliary Water Supply

The public water system shall be protected against backflow and back siphonage by the installation of an approved backflow prevention assembly if an auxiliary water supply of unknown bacteriological or chemical quality is found on the consumer's premises.

6.4 Non-Potable Fluids

If any non-potable fluids or any other objectionable substances are handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be protected against backflow and back siphonage from the premises

by the installation of a backflow prevention assembly in the service line appropriate to the degree of hazard. This shall include the handling of process water and waters originating from the utility system, which have been subject to deterioration in quality.

6.5 Installation – Retrofit or New

Backflow prevention assemblies shall be installed at the direction of the director of utilities or his/her designated representative at the meter, property line, or at a designated location for any existing facility that needs to be retrofitted. Installation criteria shall be consistent with installation criteria in AWWA Manual M14. New installations will be installed at, or as close as possible to, the meter or adjacent to a building. In all cases, the device must be placed at least before the first distribution line off of the customer's water service line. Pipe between the meter and backflow preventer shall be type L (hard) copper or brass.

6.6 Internal Cross Connections

Whenever piping and/or plumbing is undefined or where entry or accessibility to all or portions of the premises is not readily available for inspection purposes, a cross connection situation is presumed and thus prohibited. The public potable water supply system shall be protected at all times against backflow and back siphonage from the premises by the installation of a reduced pressure principal backflow prevention assembly in the service line.

6.7 Supply Line Connections

No plumbing connections of any kind shall be permitted on the pipe between the water meter and the billing face of the backflow preventer. This includes any temporary connections or irrigation systems. Upon discovery of such a connection a notice of violation shall be issued along with the appropriate action. This action will reflect the potential for a high health hazard and will follow the procedures for this hazard level.

SECTION 7 – REQUIRED BACKFLOW PROTECTION

Any uncontrolled cross connections, either actual or potential, that may represent a health hazard to the public water system shall be protected by an approved Reduced Pressure Principle Backflow Prevention Assembly at the service line meter connection. Reduced Pressure Principle Backflow Prevention Assemblies are required on all potable water services for the following reasons/instances:

1. To protect the potable water supply of Charlotte County.
2. Reclaim water is considered high hazard in Charlotte County.
3. Properties with an auxiliary water source.
4. Properties with an irrigation system.
5. Properties with a pool.

7.1 The Hazards of Backflow

The hazards of backflow are categorized as either low or high, as defined in **Section 5.1**. The hazards of backflow can further be classified into four (4) categories:

Category	Health Hazard
1. Chemical Pollutants	Low
2. Chemical Contaminant	High
3. Biological Pollutants	Low
4. Biological Contaminants	High

7.2 Residential Consumers

Residential systems shall include any backflow preventers required by the State Building Codes. These include, but are not limited to systems that have irrigation, auxiliary water sources, pumps that increase pressure or potential cross-connections. Utility-owned backflow shall be a Reduced Pressure Principle Backflow Prevention Assembly . The residential inspections will be subject to the following procedures:

1. The cross-connection inspection shall be completed by utility staff.
2. The results will be entered into data system. The form is in **Appendix A**.

7.3 Commercial Consumers

Commercial consumers shall be required to have a testable approved backflow assembly installed on the consumer's side of the potable water meter. This backflow preventer will be defined as the "primary backflow preventer."

Additional backflow preventers may be recommended for other points in the plumbing system to protect against hazards.

Irrespective of the hazard level, the “primary backflow preventor” is required to be a Reduced Pressure Principle Backflow Prevention Assembly.

7.4 Specific Consumers Where Backflow Assemblies Will Be Required

Presented below, **Table 1** identifies categories of consumers that shall ensure backflow protection is provided at or for the service connection from the public water system to the consumer as per F.A.C. 62-555.360. All categories require a Reduced Pressure Principle Backflow Prevention Assembly for backflow prevention as per CCU guidelines, which serves as the most stringent form of backflow protection.

Table 1 - Specific Consumers Where Backflow Assemblies Will Be Required

Category of Consumer
Beverage processing plant, including any brewery
Cannery, packing house, rendering plant, or any facility where fruit, vegetable, or animal matter is processed, excluding any premises where there is only restaurant or food service facility
Car wash
Chemical plant or facility using water in the manufacturing, processing, compounding, or treatment of chemicals, including any facility where a chemical that does not meet the requirements in paragraph 62-555.320(3)(a), F.A.C., is used as an additive to the water
Dairy, creamery, ice cream plant, cold-storage plant, or ice manufacturing plant
Dye plant
Film laboratory or processing facility or film manufacturing plant, excluding any small, noncommercial darkroom facility
Hospital; medical research center; sanitarium; autopsy facility; medical, dental, or veterinary clinic where surgery is performed; or plasma center
Laboratory, excluding any laboratory at an elementary, middle, or high school
Laundry (commercial), excluding any self-service laundry or Laundromat
Marine repair facility, marine cargo handling facility, or boat moorage
Metal manufacturing, cleaning, processing, or fabricating facility using water in any of its operations or processes, including any aircraft or automotive manufacturing plant
Mortuary

Category of Consumer
Premises where oil or gas is produced, developed, processed, blended, stored, refined, or transmitted in a pipeline or where oil or gas tanks are repaired or tested, excluding any premises where there is only a fuel dispensing facility
Premises where there is an auxiliary or reclaimed water system[4,5]
Premises where there is a cooling tower
Premises where there is an irrigation system that is using potable water and that… I. Is connected directly to the CWS's distribution system via a dedicated irrigation service connection II. Is connected internally to the consumer's plumbing system
Premises where there is a wet-pipe sprinkler, or wet standpipe, fire protection system that is using potable water and that… I. Is connected directly to the CWS's distribution system via a dedicated fire service connection[12] II. Is connected internally to the consumer's plumbing system
Radioactive material processing or handling facility or nuclear reactor
Paper products plant using a wet process
Plating facility, including any aircraft or automotive manufacturing plant
Restricted-access facility
Steam boiler plant
Tall building – i.e., a building with five or more floors at or above ground level
Wastewater treatment plant or wastewater pumping station
Consumer supplied with potable water via a temporary or permanent service connection from a CWS fire hydrant

7.5 Consecutive Water Systems – Bulk Water Consumers

A Consecutive Water System also known as Bulk Water Consumers that is connected to the public water system shall install and maintain the Reduced Pressure Principle Backflow Prevention Assembly installed after the master meter.

7.6 Wells

The following is a list of prohibited connections**:**

1. All wells on properties served by reclaimed reuse water shall be protected by a Reduced Pressure Principle Backflow Prevention Assembly or abandoned

according to Southwest Florida Water Management District or the South Florida Water Management District regulatory requirements for well abandonment.

2. The interconnection of the reuse transmission, distribution, or on-site irrigation system with any non-potable water supply, unless a Reduced Pressure Principle Backflow Prevention Assembly is installed and currently tested.
3. The connection of any on-site or off-site potable and/or non-potable water system with/or through the reuse irrigation systems.

7.7 Tank Filling

This subsection applies to exterminators, lawn services, landscapers, construction companies or any other bulk chemical or water users. All tanks, tank trucks, and spraying apparatus used to convey chemicals or fluids, of any kind are required to use an air gap as backflow protection when filling said tank, truck, or apparatus with potable water. Filling with potable water at unspecified sites is prohibited. Violation of this subsection will be considered a high health hazard and appropriate procedures from Section 5 will be implemented.

7.8 Restricted Premises (Security)

Any premises, where security requirements or other prohibitions or restrictions exist and it is impossible or impractical to make a complete in-plant cross-connection survey, the public water system shall be protected against backflow or back siphonage from the premises by the installation of a backflow prevention assembly in the service line meter. In this case, maximum protection will be required. An approved air-gap separation or an approved reduced pressure principal backflow prevention assembly shall be installed in each service to these premises.

7.9 Non-Potable Water Supply

On properties with an auxiliary water supply other than reclaimed water supply, the public water system shall be protected by an approved Reduced Pressure Principle Backflow Prevention Assembly, or other assembly as approved by the director of utilities or his/her designee. The cross connection between the public water system and the auxiliary water supply or any reclaimed water system is prohibited.

7.10 Objectionable, But Not Hazardous

Water or substance(s) that would be objectionable but not hazardous to health, if introduced into the public water system, shall be protected by an approved Reduced Pressure Principle Backflow Prevention Assembly .

7.11 Actual or Potential Hazard

Any material dangerous to health, which is handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be protected by an approved air-gap separation or an approved Reduced Pressure Principle Backflow Prevention Assembly .

SECTION 8 - INSTALLATION

8.1 Installation Guidelines for Backflow Prevention Assemblies

All backflow prevention assemblies shall be installed in accordance with the manufacturer's installation instructions and the following CCU guidelines:

1. Pipelines shall be thoroughly flushed to remove foreign material and debris before installing the assembly.
2. If not already provided, approved shut-off valves should be installed at each end of the assembly for testing and servicing purposes.
3. The assembly shall be placed in the horizontal position unless otherwise specified by manufacturer's instructions and authorized by CCU**.**
4. The assembly shall always be installed in an accessible location to facilitate testing and servicing.
5. The assembly shall always be installed with lowest point a minimum of 18 inches above grade for reduced pressure principal and double check valve assemblies.
6. The assembly shall be adequately supported to prevent the assembly from sagging.
7. The assembly shall meet the standards of the National Plumbing Code and AWWA Standards.
8. If the assembly is to be painted, the identification information must be protected to remain readable, which is essential to accurate recordkeeping.
9. Assembly shall be placed immediately after the meter.

Standard drawings in **Appendix B** will further depict installation of specific backflow prevention assemblies.

8.2 Location of Backflow Assembly

The location of the backflow assembly adjacent to the water service meter may create a hazardous situation. This location could also make complying with the installation specifications unnecessarily difficult and expensive. If this occurs, a variance may be requested and granted for a change in the location of the backflow assembly. The authorization by the director or his/her designee shall be in written form and applies only to the assembly in question.

SECTION 9 – REPAIRS AND TESTING

9.1 Testing of Backflow Assemblies

The first annual or biannual testing shall be performed at the time of installation. Subsequent tests of the backflow prevention assembly shall be performed by certified inspectors. Testing requires a water shutdown usually lasting approximately twenty minutes. For facilities that require an uninterrupted supply of water, and when it is not possible to provide water service from two separate meters, provisions shall be made for a "parallel installation" of backflow prevention assemblies. During testing, one assembly remains on-line while the other is being tested. Specific requirements related to commercial and residential premises are as follows:

1. **Commercial Premises** - It shall be the duty of the consumer where backflow prevention assemblies are installed to have certified inspections and operational tests on an annual schedule. The responsibility for the cost of installation, relocation, repair, maintenance, and replacement for backflow assemblies shall remain with the consumer.
2. **Residential Premises** - Where backflow prevention assemblies are installed, certified inspections and operational tests are on an annual schedule. In those instances, where CCU deems the premise to have a potential high hazard situation, additional certifications will be required.

9.2 Test and Maintenance Form

The consumer shall insure that within 30 days of placing an assembly in service, or the test or repair of a backflow prevention assembly, a report is provided to:

Charlotte County Utilities
Reclaimed and Support Services
25550 Harborview Road, Suite 3
Port Charlotte, Florida 33980

The form will be provided by CCU. The form titled "Test and Maintenance Report" is included in **Appendix A** and is also available on CCU's website.

9.3 Repairs of Backflow Assemblies

If deficiencies are noted during the test, such assemblies shall be repaired or replaced. Records of such tests and repairs shall be furnished to and be maintained by CCU.

Backflow assemblies shall be refurbished or replaced at least once every 5 to 10 years or at a lesser frequency determined by CCU if documents show that the lesser frequency is appropriate based on data from spot-testing devices in its system or based on data from backflow sensing meters in its system.

9.4 Repairs

All repairs shall be performed by either:

1. A licensed plumbing contractor or an employee of a licensed plumbing contractor meeting all the license requirements of Charlotte County.
2. A State Licensed Fire Sprinkler contractor meeting all current State and local licensing requirements working within the confines of a fire line water service, fire sprinkler system, or any part of a fire system governed by the license holder.
3. An employee of a water purveyor working within the confines of that purveyor's utility.

All persons indicated above must also maintain testing and repair certification requirements through a recognized State of Florida organization such as the University of Florida Center for Training, Research & Education for Environmental Occupations (UF TREEO) or Florida Water and Pollution Control Operators Association (FWPCOA).

9.5 Test Failure

The owner of a backflow prevention assembly that fails a test or does not meet the standards of Charlotte County ordinance shall have the backflow device repaired or altered to meet these standards within thirty (30) days of the date of the test/inspection report.

9.6 Testing of Air Gaps

Air gaps shall be inspected by Utility Backflow Specialist annually. The inspection shall include the site information, pipe size, and application. The information will be logged onto the data site. All air gaps being required at or for service connections shall be inspected at least annually.

9.7 Tester and Equipment Verification

Testers will be required to supply the following information:

1. Copies of their certificates or cards showing their certification number to CCU.
2. The most recent calibration of test gauges.
   A. The gauges should be tested annually, and the tester's recertification will be determined by the organization that supplied the training. The information should be sent to the address in Subsection 9.2.
3. Charlotte County will maintain a list of certified backflow testers and use that information to check the qualifications of the tester, submitting each test report.

9.8 Tagging of Tested or Repaired Assemblies

Only backflow preventer assemblies receiving a "passing" status shall be tagged at the time of testing. The tag shall contain the name of the certifying company and business contact information. The tag shall clearly indicate the month and year when the

certification was performed. The tag should be constructed of a durable plastic no less than .030 mil thickness. CCU reserves the right to revise tagging requirements as needed. Any other tag specifications must be approved in advance by CCU.

SECTION 10 - THERMAL EXPANSION

10.1 Thermal Expansion

Backflow preventers can create hazardous conditions by preventing the backflow of water from water heaters or any other types of equipment that create back pressure. According to plumbing code, all water heaters are required to have temperature and pressure valves (T and P). The piping inside of a consumer's facility or house is considered a closed system whenever a working backflow prevention device or assembly is installed in the main service.

10.2 Testing

All T and P valves should be tested annually by exercising the valve according to manufacturer's instructions.

10.3 Symptoms of Thermal Expansion

The following list outlines symptoms of thermal expansion:

1. The T and P valve drips during any recovery cycle in which no hot or cold water is being used.
2. Hot water pipes creak or make noise while heater is recovering, and all valves are closed.
3. Water surges when a valve is opened and then pressure drops.
4. Faucets start to drip when heater is operating, and no water is being used.
5. Water heaters, storage tanks, or other components of the water supply system fail prematurely.
6. A metallic creaking noise might actually be heard in the location of the heater as the pressure is relieved and the stretched tank returns to a natural shape.

10.4 Expansion Tanks

An expansion tank may be installed on an existing piping system to supply additional protection from thermal expansion.

A device or system to relieve thermal expansion shall be installed between a backflow prevention device or assembly and water heating system in accordance with the plumbing code to prevent thermal expansion. Plumbing Code is enforced by the local building authority. Water pressure for domestic residential or commercial potable use shall not exceed 80 pounds per square inch gauge pressure.

SECTION 11 – CROSS CONNECTION INCIDENT REPONSE PLAN

If a cross connection between the potable and any non-potable water is discovered, the representatives of CCU shall immediately discontinue potable water and/or reclaimed water service to the affected area. CCU will perform the following:

1. Determine if the potable water system is contaminated and discontinue service until the cross connection is removed.
2. Clear the potable water lines.
3. Eliminate the cross-connection.
4. Test the affected area for other possible cross-connections.
5. Within 24 hours, notify the FDEP's South District Office's domestic wastewater and drinking water programs.
6. Within five (5) days of discovery of a cross connection, submit a written report to the FDEP detailing: a description of the cross connection; how the cross connection was discovered; the exact date and time of the discovery; approximate time that the cross connection existed; the location; the cause; steps taken to eliminate the cross connection; whether reclaimed water was consumed; reports of possible illness; whether the drinking water system was contaminated; the steps taken to clear the drinking water system; when the cross connection was eliminated; plan of action for testing for other possible cross connections in the area; and an evaluation of the cross-connection control and inspection program to insure that future cross connections do not occur.
7. Observe any repairs of customer piping arrangements or appurtenances that were removed or altered to eliminate the cross-connection.
8. Return potable water and/or reclaimed water service to the system once all cross-connections are eliminated, and the affected area has been properly flushed and cleared of any cross-contamination.

SECTION 12 - RECORDKEEPING

12.1 Recordkeeping

Records concerning installation and testing shall be kept by CCU for a period no less than ten (10) years. (Ref.: F.A.C. Chapter 62-550.720). The record for each site shall include the following information:

1. Information on the primary backflow preventer installed at the site, including type, size, manufacturer, model number, location, and serial number.
2. Information on the site including owner's name, business name, site address, mailing address, and premise number.
3. A copy of the "Test and Maintenance Reports" including initial test, annual test, repair reports and tests following repairs.
4. Any reports of problems associated with the primary backflow preventers or cross connections at the site.
5. Results of the cross-connection surveys.
6. Reports of cross connections and the action taken as a result of the cross connection including but not limited to notices of non-compliance.
7. Any other communications concerning cross connections relating to each site.

All records must be sent to the following address:

Charlotte County Utilities
Reclaim and Support Services
25550 Harborview Road, Suite 3
Port Charlotte, Florida 33980
Tel: (941) 764-4504
Fax: (941) 764-4565

APPENDIX A

Backflow Preventor Test and Maintenance Report

Charlotte County Utilities
25550 Harborview Rd, Suite 3
Port Charlotte, FL 33980
Phone: 941-764-4504 Fax: 941-764-4565
CCUBackflow@charlottecountyfl.gov
www.charlottecountyfl.gov/dept/utilities
Delivering Exceptional Service

BACKFLOW PREVENTOR TEST AND MAINTENACE REPORT

Premise No. _____ **Water Meter No.** _____ **CCU WO No.** _____ **BF No.** _____

Customer _____

Street Address _____

Location of Assembly _____

Potable ☐ Fireline ☐ Irrigation ☐

Type of Assembly: ☐ RP ☐ DC ☐ DDC ☐ PVB ☐ AVB ☐ DUC ☐ SIZE

BF Manufacturer: _____ Model: _____ Serial No. _____

Gauge Manf: _____ Serial No. _____ Date Calibrated: _____

Check Valve #1	Relief Valve	Check Valve #2	Pressure Vacuum Breaker
leaked or ☐ closed tight ☐	opened at _____ psi or did not open ☐	leaked or ☐ closed tight ☐	*Air Inlet*: Did not open ☐ or held at _____ psi
differential pressure across check valve _____ psi	*Outlet shut-off valve:* leaked ☐ closed tight ☐	**OPTIONAL TEST** differential pressure across check valve _____ psi	*Check Valve:* **Leaked** ☐ or held at _____ psi
Cleaned only ☐ Replaced: rubber kit ☐ CV assembly ☐ or disc ☐ O-rings ☐ Seat ☐ Spring ☐ stem/guide ☐ retainer ☐ lock nuts ☐ other ☐	RV Cleaned only ☐ Replaced: RV rubber kit ☐ RV assembly ☐ or disc ☐ diaphragm(s) ☐ seat ☐ spring ☐ guide ☐ O-rings ☐ other ☐	Cleaned only ☐ Replaced: rubber kit ☐ CV assembly ☐ or disc ☐ O-rings ☐ Seat ☐ Spring ☐ stem/guide ☐ retainer ☐ lock nuts ☐ other ☐	Cleaned only ☐ Replaced: rubber kit ☐ CV assembly ☐ disc, air inlet ☐ disc, CV ☐ seat, CV ☐ Spring, air inlet ☐ Spring, CV ☐ retainer ☐ guides ☐ O-rings ☐ other ☐
differential pressure across check valve _____ psi	Relief valve opened at check valve _____ psi	differential pressure across check valve _____ psi	air inlet _____ psi check valve _____ psi

Note: All repairs shall be completed within five (5) working days.

Remarks: _____

I herby certify that this data is accurate and reflects the proper operation and maintenance of the assembly.

TESTER: (Print Name) _____ Date/Time _____

(sign) _____ CERT.NO. _____

Company Name _____

Company Address _____

THIS ASSEMBLY: ☐ PASSED ☐ FAILED

Rev. 5/22/2020

BACKFLOW PREVENTION
NOTICE TO INSTALL – 30 DAY

Date:

Name:

Address

Dear Sir/Madam:

To continue to maintain the quality of Charlotte County's water supply at the highest level possible, backflow preventers are required on all services where the water may come in contact with a contaminant, or where there is the possibility of a cross connection or backflow. In accordance with local ordinance and state rules, "an approved backflow prevention device is required to be installed on the potable water service by a licensed plumber."

You are required to have such equipment installed within **30** days from the date of this letter.

Please find attached the "Test and Maintenance Report" form, which must be completed and returned to this office after installation of the backflow assembly, and a list of approved certified backflow prevention assembly testers and installers located in the area.

Feel free to contact us if you have any questions. Your cooperation in this matter is greatly appreciated.

Sincerely,

Charlotte County Utilities
Reclaim and Support Services
25550 Harborview Road, Suite 3
Port Charlotte, Florida 33980
Tel: (941) 764-4504
Fax: (941) 764-4565
Email: CCUBackflow@charlottecountyfl.gov

BACKFLOW PREVENTION
NOTICE TO TEST – 60 DAY

Date:

Name:

Address:

Dear Sir/Madam:

In order to continue to maintain the quality of Charlotte County's water supply at the highest level possible, backflow preventers are required to be tested on an annual basis. Our records show that your backflow assembly is due to be tested. You are required to have such equipment tested within **60** days from the date of this letter.

The test should be completed by an individual certified in backflow testing.

Please find attached the "Test and Maintenance Report" form, which must be completed and returned to this office after testing of the backflow assembly. Feel free to contact us if you have any questions. Your cooperation in this matter is greatly appreciated.

Sincerely,

Charlotte County Utilities
Reclaim and Support Services
25550 Harborview Road, Suite 3
Port Charlotte, Florida 33980
Tel: (941) 764-4504
Fax: (941) 764-4565
Email: CCUBackflow@charlottecountyfl.gov

BACKFLOW PREVENTION
NOTICE TO TEST – 30 DAY

Date:

Name:

Address:

Dear Sir/Madam:

In order to continue to maintain the quality of Charlotte County's water supply at the highest level possible, backflow preventers are required to be tested on an annual basis. Our records show that your backflow assembly is due to be tested. You are required to have such equipment tested within **30** days from the date of this letter.

The test should be completed by an individual certified in backflow testing.

Please find attached the "Test and Maintenance Report" form, which must be completed and returned to this office after testing of the backflow assembly. Feel free to contact us if you have any questions. Your cooperation in this matter is greatly appreciated.

Sincerely,

Charlotte County Utilities
Reclaim and Support Services
25550 Harborview Road, Suite 3
Port Charlotte, Florida 33980
Tel: (941) 764-4504
Fax: (941) 764-4565
Email: CCUBackflow@charlottecountyfl.gov

BACKFLOW PREVENTION

FIRST NOTICE OF NON-COMPLIANCE

Date:

In the Matter of:

Consumer:

Address:

Owner:

On (**date of mailing**), a second letter was mailed to you as notification of the testing requirements of existing backflow prevention assembly(s) installed at the referenced address.

You are hereby given notice to comply with the testing requirements set forth in the Charlotte County Manual of Rules and Regulations Governing Cross-connection Control.

The completed backflow test report must be provided to Charlotte County Utilities within **15** days of receipt of this notice.

If you fail to respond to this letter, Charlotte County Utilities will arrange for your water service to be terminated.

Please contact me if you have any questions.

Sincerely,

Charlotte County Utilities
Reclaim and Support Services
25550 Harborview Road, Suite 3
Port Charlotte, Florida 33980
Tel: (941) 764-4504
Fax: (941) 764-4565
Email: CCUBackflow@charlottecountyfl.gov

BACKFLOW PREVENTION

FINAL NOTICE OF NON-COMPLIANCE

IN THE MATTER OF:

CONSUMER:

ADDRESS:

OWNER **DATE**

LEGAL AUTHORITY

In accordance with Charlotte County Code Chapter Sec. 3-8-202, you are hereby notified that the above-described property is in non-compliance of _____, findings are made, and notice issued pursuant to the authority vested in the Director of Utilities.

Charlotte County Utilities is charged with application and enforcement of the Cross-Connection Control Program.

To protect the potable water system, Charlotte County Utilities administers a Cross-Connection Control Program.

Upon inspection of this facility's backflow preventer, it was determined that an issue of non-compliance exists.

VIOLATION: _____

THEREFORE, BASED ON THE ABOVE FINDINGS, YOU ARE HEREBY NOTIFIED THAT:

This facility is in violation of Charlotte County Code, Section Sec. 3-8-202

This facility was inspected and warned of the violation on_____. Facility was re-inspected on_____ and violation still exists.

You have _____**DAYS** to respond in writing or by telephone call stating what corrective actions will or have been taken.

FAILURE TO COMPLY WITH NOTICE MAY RESULT IN A FINE OF UP TO $1000.00 PER VIOLATION PER DAY. THE FINE MAY BECOME A LIEN UPON YOUR PROPERTY. YOUR FAILURE TO PAY ANY FINE MAY RESULT IN TERMINATION OF SERVICE AND FURTHER LEGAL ACTION. YOU HAVE THE RIGHT TO APPEAL PURSUANT TO SECTION 3-8-167 OF CHARLOTTE COUNTY CODE.

Signed: _____ Date _____

Charlotte County Utilities
Reclaimed and Support Services
25550 Harborview Road, Suite 3
Port Charlotte, Florida 33980
Tel: (941) 764-4504
Fax: (941) 764-4565
Email: CCUBackflow@charlottecountyfl.gov

Inspection Forms and Questionnaire

Charlotte County Utilities
Residential Cross-Connection Inspection

Information

Name _____ Date _____

Address _____

Email _____ Phone # _____ Premise # _____

Single Family ☐ Multi Family ☐ Apartment/Condo ☐

Inspection Type

Initial ☐ Re-inspection ☐ Customer Request ☐

Spot ☐ Periodic ☐ Incident Follow-up ☐

Inspection

Any Auxiliary Water Source Yes ☐ No ☐ Pool Yes ☐ No ☐

Irrigation System Yes ☐ No ☐ Color Coded/Labeled Yes ☐ No ☐

Flow Test Results No Flow ☐ Flow ☐ *** Flow indicates a possible cross-connection**

Describe Cross-Connection _____

_____

Describe Corrective Action (if needed) _____

_____

Backflow Preventer Information

Type _____ Manufacturer _____ Model _____

Serial # _____ Size _____

Inspector _____

Charlotte County Utilities
Commercial Cross-Connection Inspection

Information

Name _____ Date _____

Address _____

Email Phone # Premise #

Type of Commercial _____

How many water service connections to Premise _____

Inspection Type

Initial ☐ Re-Inspection ☐ Customer Request ☐
Spot ☐ Periodic ☐ Incident Follow-up ☐

Inspection

Any Auxiliary Water Source	Yes ☐	No ☐				Pool	Yes ☐	No ☐
Irrigation System	Yes ☐	No ☐				Color Coded/Labeled	Yes ☐	No ☐
Fire Sprinkler System	☐		Industrial fluids	☐		Baptismal fountain or tub	☐	
Water cooling tank or evaporator	☐		steam equipment	☐		Water softener	☐	
Truck or tank filling equipment	☐		Car wash facilities	☐		Shampoo bowl	☐	
Water cooled equipment	☐		Chemical feeder	☐		Yard hydrant	☐	
pressure washer	☐		Pressure booster	☐		Condenser washer	☐	
Soap injection	☐		Sterilizer	☐		Cooling towers	☐	
Grease traps	☐		Embalming	☐		Medical / Dental equipment	☐	
Commercial Dishwasher	☐		Air washer	☐		Dialysis Equipment	☐	
Flow Test Results	No Flow ☐	Flow ☐						

*** Flow indicates a possible cross-connection**

Describe Cross-Connection _____

_____

Describe Corrective Action (if needed) _____

_____

Backflow Preventer Information - Potable

Type Manufacturer Model

Serial # _____ Size _____ Tagged Yes ☐ No ☐

Tagged Date

Backflow Preventer Information - Fire Line

Type _____ Manufacturer _____ Model _____

Serial # _____ Size _____ Tagged Yes ☐ No ☐

Tagged Date _____

Backflow Preventer Information - Irrigation

Type _____ Manufacturer _____ Model _____

Serial # _____ Size _____ Tagged Yes ☐ No ☐

Tagged Date _____

Inspector _____

CHARLOTTE COUNTY
FLORIDA

CROSS-CONNECTION QUESTIONNAIRE

For Water Accounts to comply with Rule 62-550.200, F.A.C.

Completion of this form is a condition of water service! This Cross-Connection Questionnaire is required for all water accounts. Charlotte County kindly requests your full cooperation in completing and submitting this form.

It is important for all water service customers to be involved in keeping their drinking water safe from contamination. The most common way contaminants enter the drinking water system is through cross-connections in the plumbing system. A cross-connection is an actual or potential link between plumbing pipes and a non-potable water source such as a sink full of water or a hose-end sprayer containing chemicals.

Backflow occurs when water flows in the opposite direction through a pipe or plumbing fixture. Backflow from a cross-connection can occur when pressure in the water main drops below the line pressure in your plumbing system causing a vacuum which results in water returning to the Public Water System.

Please fill out this Cross-connection Questionnaire as accurately as possible. We will use this information to determine the proper backflow prevention assembly. Any device that uses water and is connected to your water system must be mentioned even if not included in the questionnaire.

Account Information

Name of Owner:	Name of Business: (if applicable)			
Phone:	Email:			
Physical Address				
City:	State:		Zip:	
Mailing Address (if different than physical)				
City:	State:		Zip:	
Premise #:				

1. Check the following that apply and answer the questions that pertain to that facility type selected.

	Commercial	Type of Operation:	
	Home Business	Type of Operation:	
	Restricted Access Facility	Type of Operation:	
	Building (any multi-story, multi family)		
	Home Owner (single family residential)		

Page 1

Charlotte County Utilities
Reclaim & Support Services
25550 Harborview Rd., Suite 3, Port Charlotte, FL 33983
941.764.4504
941.764.4565 fax
CharlotteCountyFL.gov

2. Water will be used for (Please check all that apply):

Cooking/Drinking
Lawn/Garden Irrigation System
Pool/Spa
Auxiliary Water System (Well/Canal/other/Pond/Reclaim)
Processing
Boilers/Chillers
Cooling tower
Solar hot-water system
Commercial equipment - please list ALL other equipment water will be used for (e.g., steam cooker, chemical dispenser, pressure washer, dish washing equipment, automatic hood wash, lab equipment, autoclaves, autopsy equipment, film processing machine, dialysis equipment, etc:

3. Is water pumped at facility for any purpose? Yes ☐ No ☐

4. Does the facility have Chemical or Hazardous Materials storage? Yes ☐ No ☐

5. Are water supply lines or hose bibs submerged in tanks, vats, pool, etc.? Yes ☐ No ☐

6. Do you have Backflow Prevention Assemblies located on the premises? Yes ☐ No ☐

If so, please provide the following:

Make:		Model:		Serial #:		Size:		Inch
Location of Assembly:								
Date of Last Test:								

Certification Statement

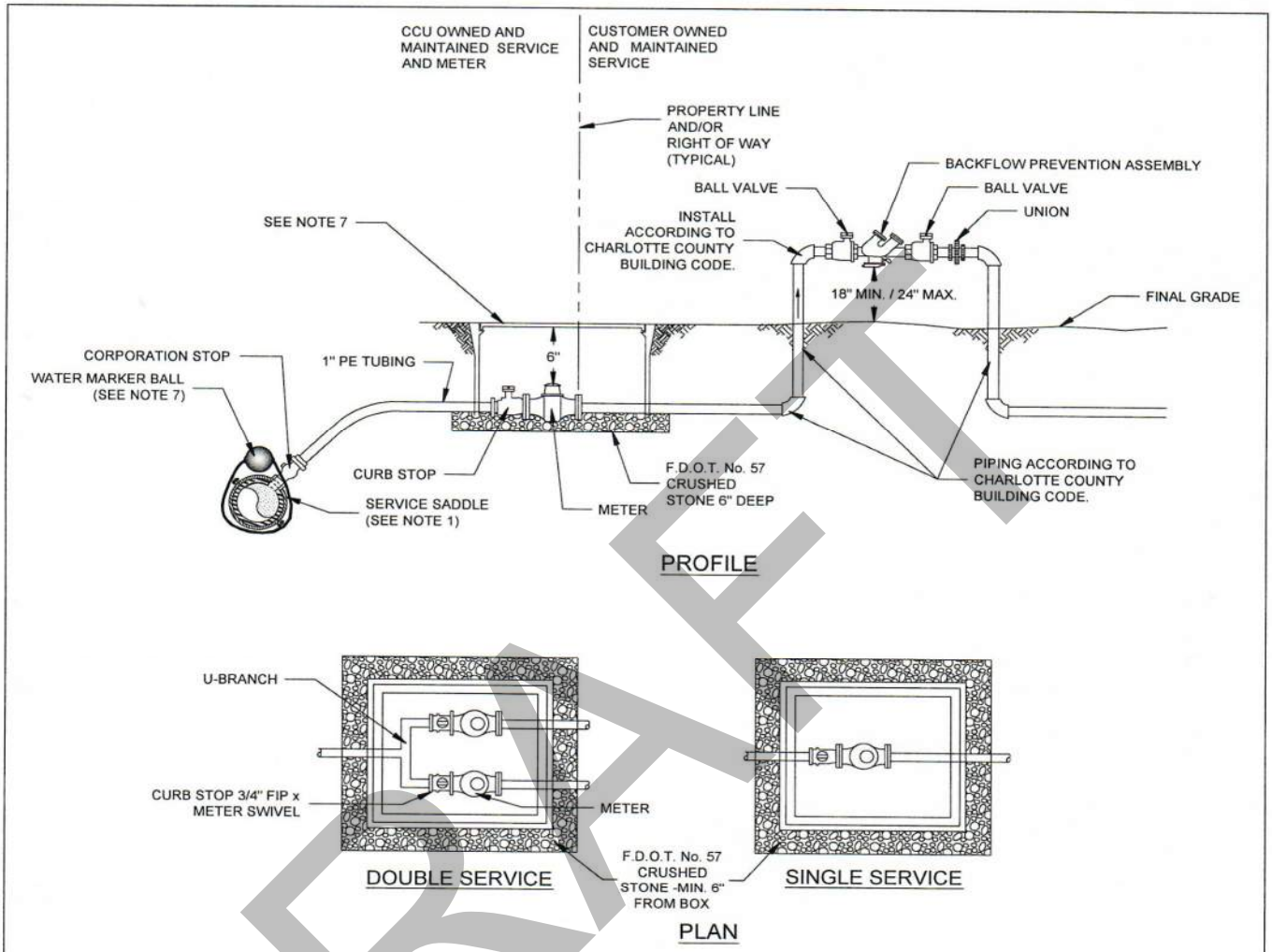
- The authorized representative certifies that the information provided in this Cross-Connection questionnaire is accurate to the best of this/her knowledge.
- The Customer agrees that upon all changes in water use, alterations and additions to the plumbing Premise, to notify the Utility and to comply with any additional requirements for Cross Connection Control.

Authorized Representative Name		Phone:
Name		Email:
Authorized Representative Signature		Date

Page 2

APPENDIX B

5/8" - 1" Residential Water Meter Details



NOTES:

1. SERVICE SADDLES SHALL BE EPOXY OR NYLON COATED WITH IRON PIPE THREAD INLET WITH DOUBLE STAINLESS STEEL STRAPS.
2. SERVICE AND METER SHALL BE PLACED/LOCATED IN RIGHT-OF-WAY AT PROPERTY LINE AND/OR EASEMENT PROVIDED TO UTILITY BY CUSTOMER.
3. BACKFLOW SHALL BE REDUCED PRESSURE BACKFLOW PREVENTOR IN ACCORDANCE WITH AWWA M14 STANDARDS AND PLACED IMMEDIATELY DOWNSTREAM OF METER.
4. LOCATION OF METER BOX SHALL BE AT CCU DISCRETION.
5. DISTANCE FROM TOP OF METER TO BOTTOM OF LID SHALL BE 6" TO 8". DISTANCE SHALL BE DETERMINED WHEN NEW METER IS SET BY CCU.
6. LONG SERVICE UNDER PAVEMENT SHALL BE PE PIPING ENCASED IN SCHEDULE 40 PVC.
7. FOR EACH SERVICE TAP A MARKER BALL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS AND ATTACHED TO PIPE WITH CINCH-TIES/TIE-WRAPS. MAXIMUM DEPTH 5 FEET.

DATE: 11/01/2011	5/8" - 1" WATER METER WITH BACKFLOW PREVENTER	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL.
DRAWN BY: DEC		PW-06
APPROVED BY: BRB	CHARLOTTE COUNTY UTILITIES	ID: PW-06-1WM -5-8.dwg

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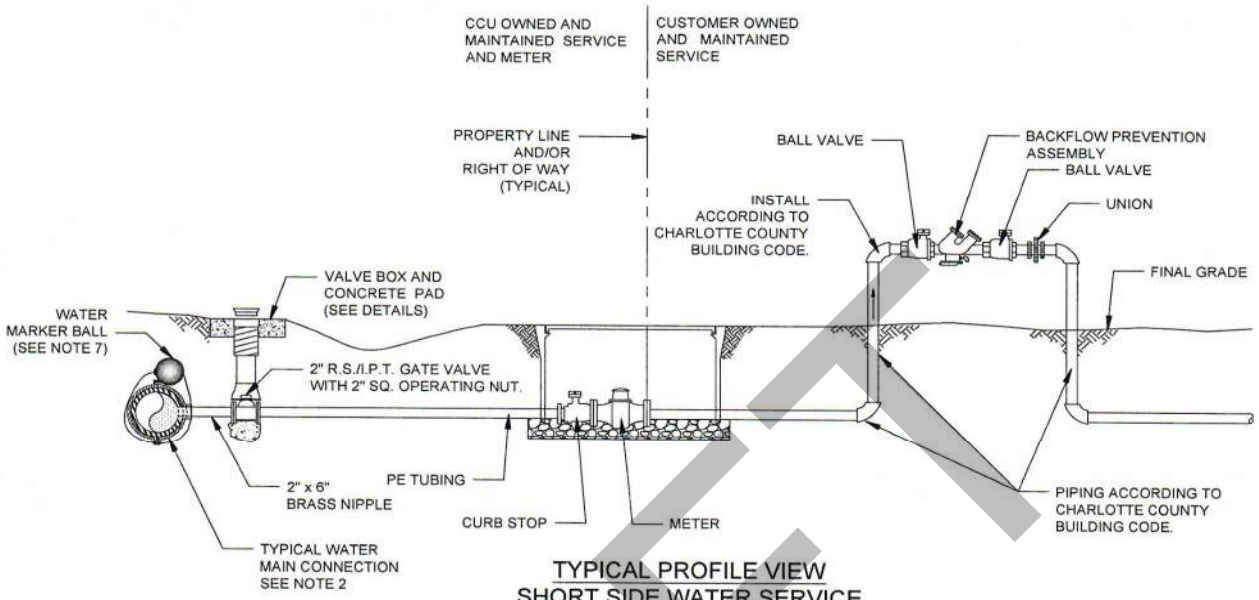
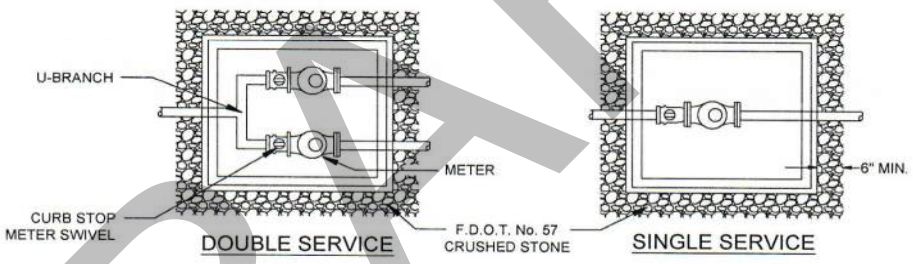
1 1/2" - 2" Residential Water Meter Details



TYPICAL PROFILE VIEW
SHORT SIDE WATER SERVICE
n.t.s.



METER PLAN VIEW
n.t.s.

NOTES:

1. SERVICE SADDLES SHALL BE EPOXY OR NYLON COATED WITH IRON PIPE THREAD INLET WITH DOUBLE STAINLESS STEEL STRAPS.
2. SERVICE AND METER TO BE PLACED/LOCATED IN RIGHT-OF-WAY AT PROPERTY LINE AND/OR EASEMENT PROVIDED TO UTILITY BY CUSTOMER.
3. BACKFLOW SHALL BE REDUCED PRESSURE OR DUAL CHECK BACKFLOW PREVENTOR IN ACCORDANCE WITH AWWA M14 STANDARDS AND PLACED IMMEDIATELY DOWNSTREAM OF METER.
4. LONG SERVICE UNDER PAVEMENT SHALL BE PE PIPING INCASED IN SCHEDULE 40 PVC.
5. DISTANCE FROM TOP OF METER TO BOTTOM OF LID SHALL BE 6" TO 8". DISTANCE SHALL BE DETERMINED WHEN NEW METER IS SET BY CCU.
6. LOCATION OF METER BOX SHALL BE IN ACCORDANCE WITH CCU.
7. FOR EACH SERVICE TAP A MARKER BALL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS AND ATTACHED TO PIPE WITH CINCH-TIES/TIE-WRAPS. MAXIMUM DEPTH 5 FEET.

DATE: 11/01/2011	1 1/2" - 2" WATER METER WITH BACKFLOW PREVENTER	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL.
DRAWN BY: DEC		PW-07
APPROVED BY: BRB	CHARLOTTE COUNTY UTILITIES	ID: PW-07-2WM.dwg

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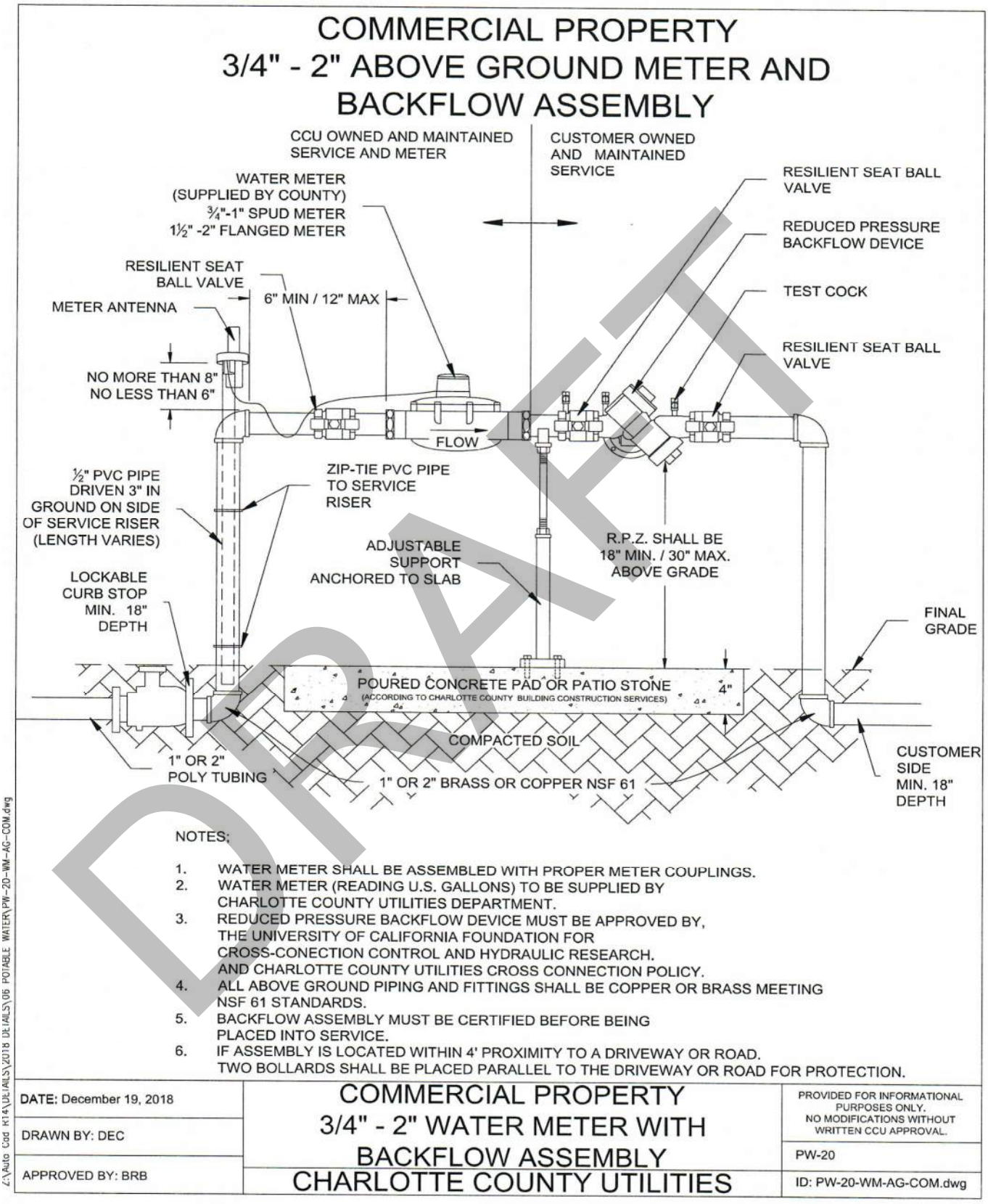
3/4" - 2" Commercial Water Meter Details


COMMERCIAL PROPERTY
3/4" - 2" ABOVE GROUND METER AND BACKFLOW ASSEMBLY
CCU OWNED AND MAINTAINED SERVICE AND METER
CUSTOMER OWNED AND MAINTAINED SERVICE
WATER METER (SUPPLIED BY COUNTY)
¾"-1" SPUD METER
1½" -2" FLANGED METER
RESILIENT SEAT BALL VALVE
REDUCED PRESSURE BACKFLOW DEVICE
TEST COCK
RESILIENT SEAT BALL VALVE
RESILIENT SEAT BALL VALVE
6" MIN / 12" MAX
METER ANTENNA
NO MORE THAN 8"
NO LESS THAN 6"
FLOW
½" PVC PIPE DRIVEN 3" IN GROUND ON SIDE OF SERVICE RISER (LENGTH VARIES)
ZIP-TIE PVC PIPE TO SERVICE RISER
ADJUSTABLE SUPPORT ANCHORED TO SLAB
R.P.Z. SHALL BE 18" MIN. / 30" MAX. ABOVE GRADE
LOCKABLE CURB STOP MIN. 18" DEPTH
FINAL GRADE
POURED CONCRETE PAD OR PATIO STONE
(ACCORDING TO CHARLOTTE COUNTY BUILDING CONSTRUCTION SERVICES)
4"
COMPACTED SOIL
1" OR 2" POLY TUBING
1" OR 2" BRASS OR COPPER NSF 61
CUSTOMER SIDE MIN. 18" DEPTH
NOTES:
1. WATER METER SHALL BE ASSEMBLED WITH PROPER METER COUPLINGS.
2. WATER METER (READING U.S. GALLONS) TO BE SUPPLIED BY CHARLOTTE COUNTY UTILITIES DEPARTMENT.
3. REDUCED PRESSURE BACKFLOW DEVICE MUST BE APPROVED BY, THE UNIVERSITY OF CALIFORNIA FOUNDATION FOR CROSS-CONECTION CONTROL AND HYDRAULIC RESEARCH. AND CHARLOTTE COUNTY UTILITIES CROSS CONNECTION POLICY.
4. ALL ABOVE GROUND PIPING AND FITTINGS SHALL BE COPPER OR BRASS MEETING NSF 61 STANDARDS.
5. BACKFLOW ASSEMBLY MUST BE CERTIFIED BEFORE BEING PLACED INTO SERVICE.
6. IF ASSEMBLY IS LOCATED WITHIN 4' PROXIMITY TO A DRIVEWAY OR ROAD. TWO BOLLARDS SHALL BE PLACED PARALLEL TO THE DRIVEWAY OR ROAD FOR PROTECTION.
DATE: December 19, 2018
DRAWN BY: DEC
APPROVED BY: BRB
COMMERCIAL PROPERTY
3/4" - 2" WATER METER WITH BACKFLOW ASSEMBLY
CHARLOTTE COUNTY UTILITIES
PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL.
PW-20
ID: PW-20-WM-AG-COM.dwg
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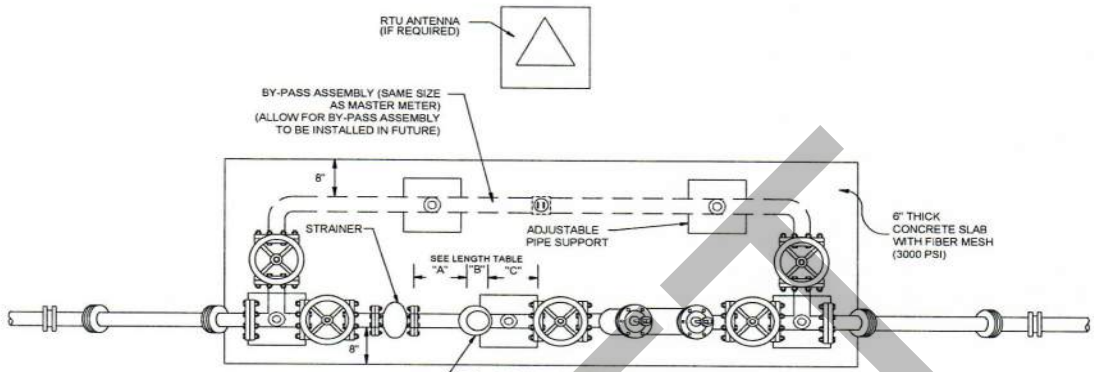
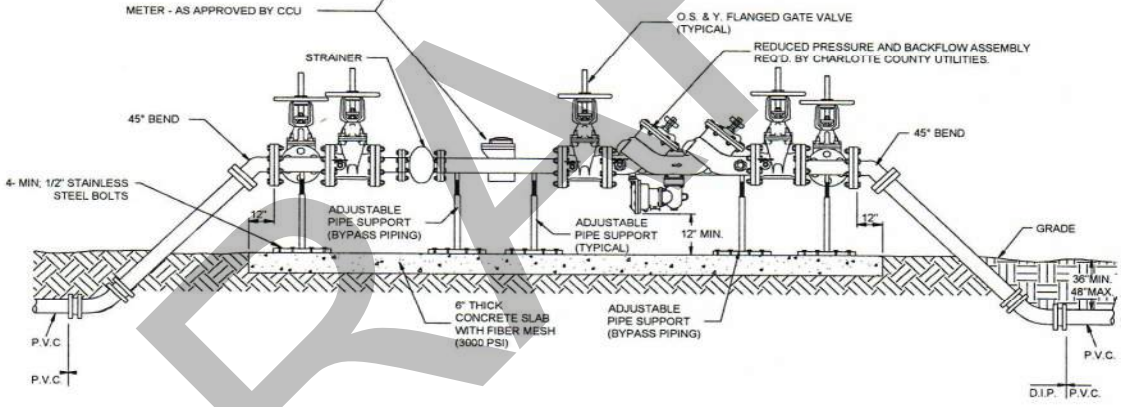
3" & Above Water Meter w/ bypass Details



PLAN VIEW



PROFILE VIEW

NOTE:

1. REDUCED PRESSURE AND BACKFLOW ASSEMBLY SHALL MEET THE FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH UNIVERSITY OF SOUTHERN CALIFORNIA REQUIREMENTS AND SHALL BE APPROVED BY CCU.

2. BYPASS METER SHALL BE INSTALLED BY THE CONTRACTOR IF REQUIRED BY THE ENGINEERING DRAWINGS AND CCU.

3. ADJUSTABLE PIPE SUPPORTS TO BE ANCHORED TO CONCRETE SLAB.

LENGTH TABLE	
LABEL	LENGTH
A	MINIMUM 7 PIPE DIAMETERS
B	LENGTH PER MANUFACTURER
C	MINIMUM 3 PIPE DIAMETERS

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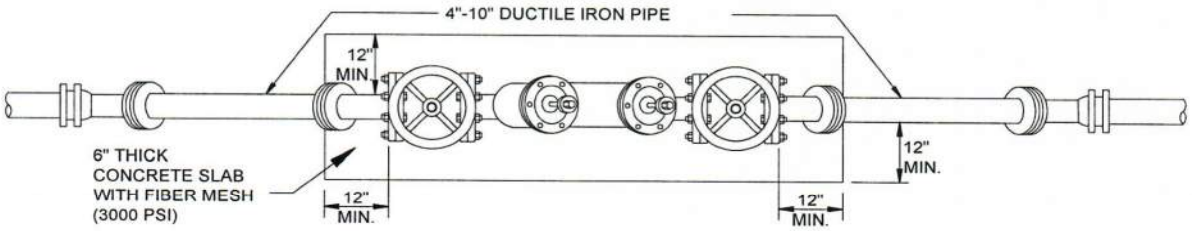
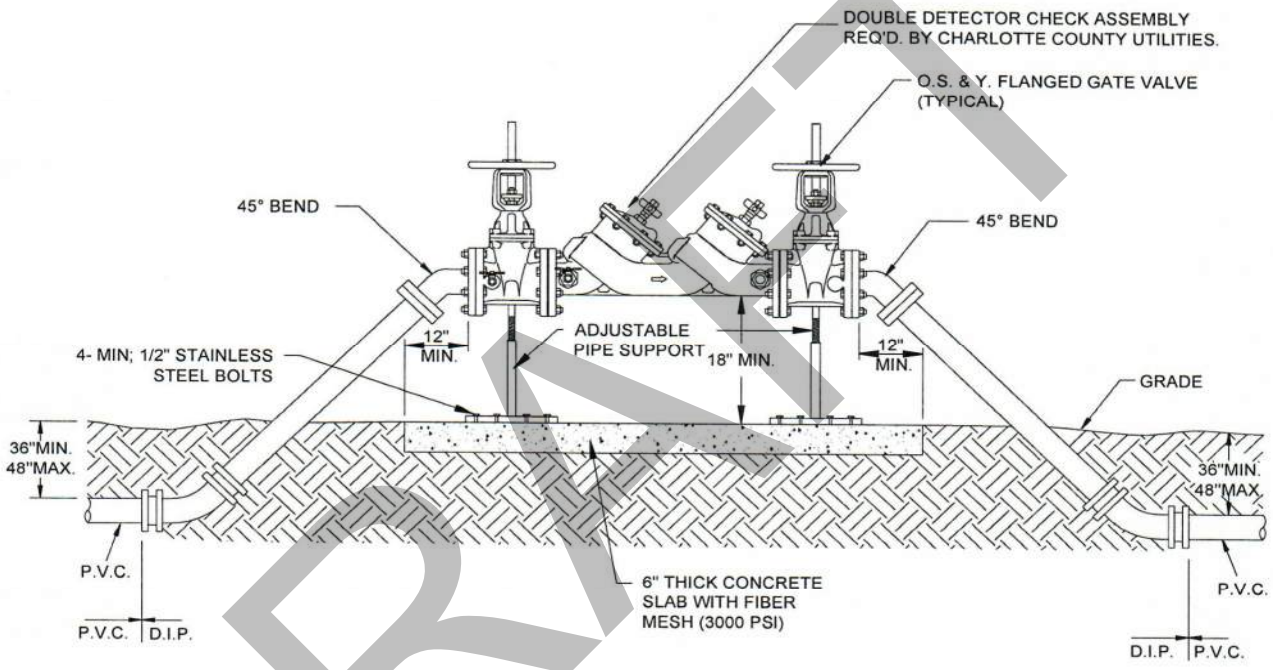
DATE: 11/01/2011	3" & ABOVE WATER METERS WITH PROVISION FOR BY-PASS ASSEMBLY	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL.
DRAWN BY: DEC		PW-05
APPROVED BY: BRB	CHARLOTTE COUNTY UTILITIES	ID: PW-05-3WMBP.dwg

4"- 10" Fire Line Backflow Details



PLAN VIEW



ELEVATION "A-A"

NOTE:

1. DOUBLE DETECTOR CHECK ASSEMBLY SHALL MEET FOUNDATION FOR CROSS-CONNECTION CONTROL AND HYDRAULIC RESEARCH UNIVERSITY OF SOUTHERN CALIFORNIA REQUIREMENTS AND SHALL BE APPROVED BY CCU.
2. BACKFLOW CAN HAVE BUILT IN FDC IF SHOWN ON THE ENGINEERING DRAWINGS.
3. ADJUSTABLE PIPE SUPPORTS TO BE ANCHORED TO CONCRETE SLAB.

DATE: 11/01/2011	4"-10" BACKFLOW PREVENTION ASSEMBLY FOR FIRE LINE SYSTEMS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL.
DRAWN BY: DEC		PW-04
APPROVED BY: BRB	CHARLOTTE COUNTY UTILITIES	ID: PW-04-FLBF.dwg

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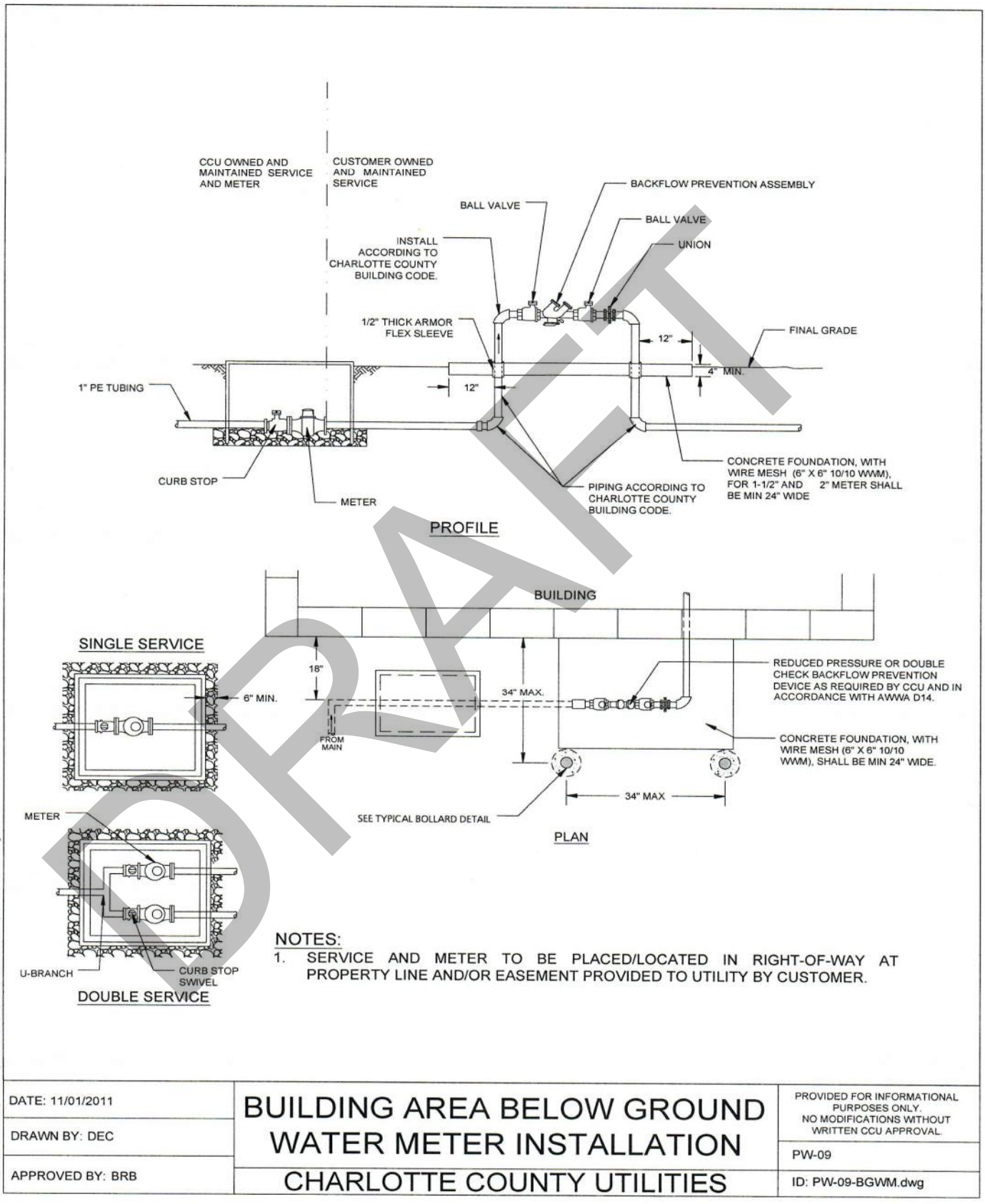
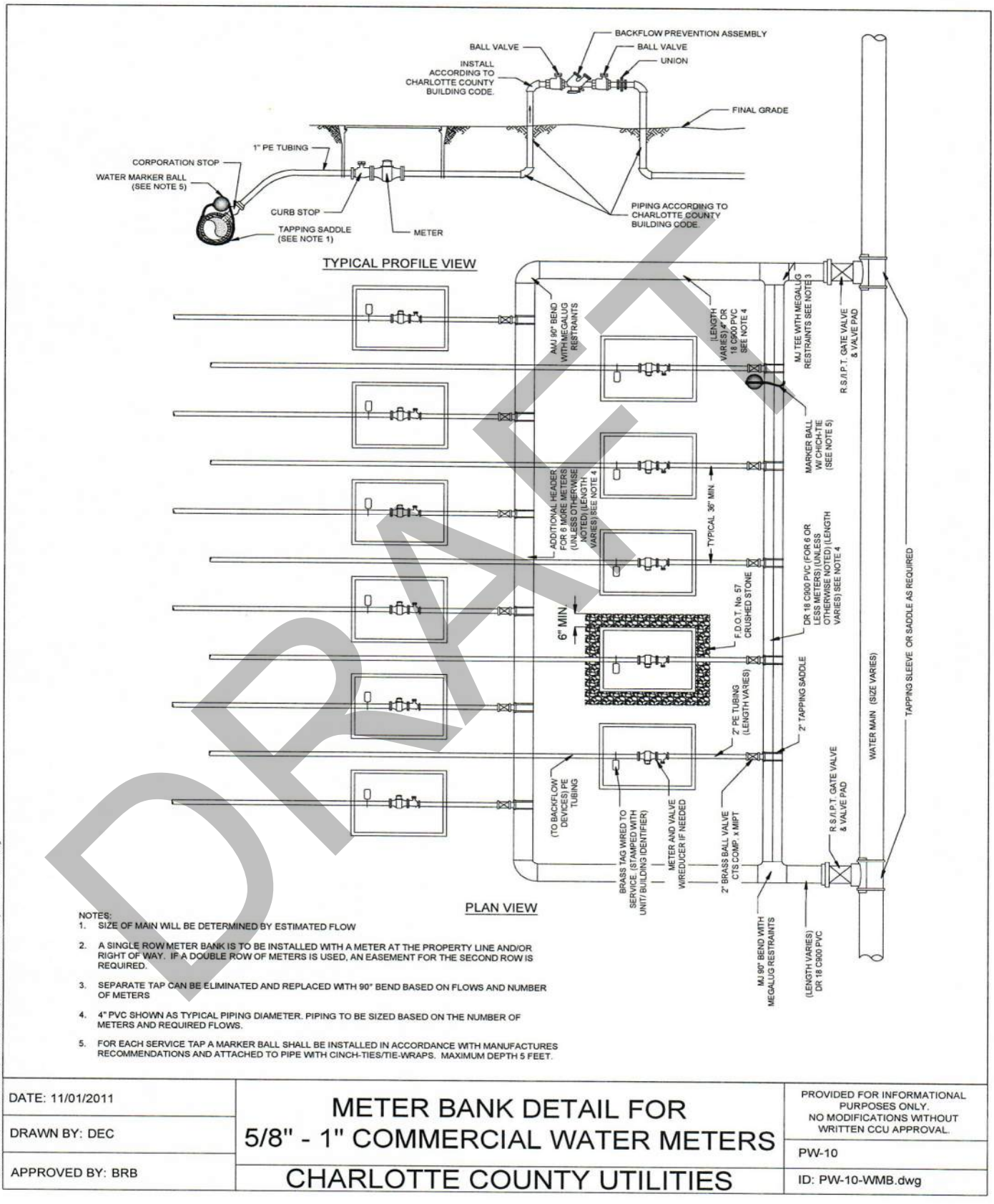
Building Area Below Ground Meter Install Details


CCU OWNED AND MAINTAINED SERVICE AND METER
CUSTOMER OWNED AND MAINTAINED SERVICE
BACKFLOW PREVENTION ASSEMBLY
BALL VALVE
BALL VALVE
UNION
INSTALL ACCORDING TO CHARLOTTE COUNTY BUILDING CODE.
1/2" THICK ARMOR FLEX SLEEVE
12"
FINAL GRADE
4" MIN.
12"
1" PE TUBING
CURB STOP
METER
PIPING ACCORDING TO CHARLOTTE COUNTY BUILDING CODE.
CONCRETE FOUNDATION, WITH WIRE MESH (6" X 6" 10/10 WWM), FOR 1-1/2" AND 2" METER SHALL BE MIN 24" WIDE
PROFILE
BUILDING
SINGLE SERVICE
18"
6" MIN.
34" MAX.
FROM MAIN
REDUCED PRESSURE OR DOUBLE CHECK BACKFLOW PREVENTION DEVICE AS REQUIRED BY CCU AND IN ACCORDANCE WITH AWWA D14.
CONCRETE FOUNDATION, WITH WIRE MESH (6" X 6" 10/10 WWM), SHALL BE MIN 24" WIDE.
34" MAX
SEE TYPICAL BOLLARD DETAIL
PLAN
METER
U-BRANCH
CURB STOP SWIVEL
DOUBLE SERVICE
NOTES:
1. SERVICE AND METER TO BE PLACED/LOCATED IN RIGHT-OF-WAY AT PROPERTY LINE AND/OR EASEMENT PROVIDED TO UTILITY BY CUSTOMER.
DATE: 11/01/2011
DRAWN BY: DEC
APPROVED BY: BRB
BUILDING AREA BELOW GROUND WATER METER INSTALLATION
CHARLOTTE COUNTY UTILITIES
PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL.
PW-09
ID: PW-09-BGWM.dwg

5/8" - 1" Commercial Water Meter Bank Details



NOTES:
1. SIZE OF MAIN WILL BE DETERMINED BY ESTIMATED FLOW
2. A SINGLE ROW METER BANK IS TO BE INSTALLED WITH A METER AT THE PROPERTY LINE AND/OR RIGHT OF WAY. IF A DOUBLE ROW OF METERS IS USED, AN EASEMENT FOR THE SECOND ROW IS REQUIRED.
3. SEPARATE TAP CAN BE ELIMINATED AND REPLACED WITH 90° BEND BASED ON FLOWS AND NUMBER OF METERS
4. 4" PVC SHOWN AS TYPICAL PIPING DIAMETER. PIPING TO BE SIZED BASED ON THE NUMBER OF METERS AND REQUIRED FLOWS.
5. FOR EACH SERVICE TAP A MARKER BALL SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURES RECOMMENDATIONS AND ATTACHED TO PIPE WITH CINCH-TIES/TIE-WRAPS. MAXIMUM DEPTH 5 FEET.

DATE: 11/01/2011	METER BANK DETAIL FOR 5/8" - 1" COMMERCIAL WATER METERS	PROVIDED FOR INFORMATIONAL PURPOSES ONLY. NO MODIFICATIONS WITHOUT WRITTEN CCU APPROVAL.
DRAWN BY: DEC		PW-10
APPROVED BY: BRB	CHARLOTTE COUNTY UTILITIES	ID: PW-10-WMB.dwg